(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 3 February 2005 (03.02.2005)

PCT

(10) International Publication Number WO 2005/010871 A1

(51) International Patent Classification⁷:

G11B 7/00

(21) International Application Number:

PCT/AU2004/000987

(22) International Filing Date:

23 July 2004 (23.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003903802

23 July 2003 (23.07.2003) AU

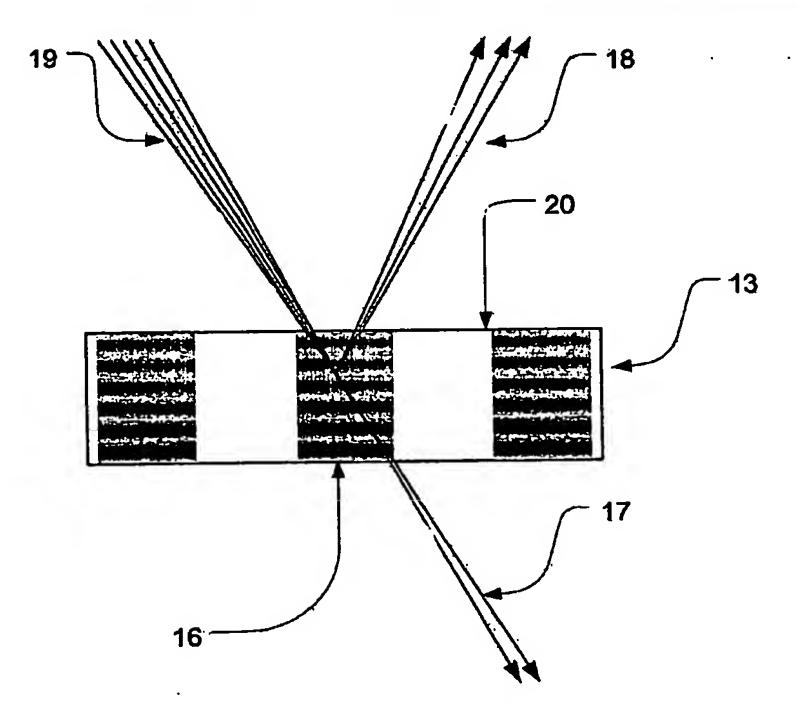
- (71) Applicant (for all designated States except US): BAND-WIDTH FOUNDRY PTY LTD [AU/AU]; 102 National Innovation Centre, Australian Technology Park, Eveleigh, New South Wales 1430 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BURYAK, Alexander [AU/AU]; 53 Coronga Crescent, Killara, New South Wales 2071 (AU). KOLOSSOVSKI, Kazimir [RU/AU];

72 Lachlan Street, Macquarie, Australian Capital Territory 2614 (AU). STEPANOV, Dmitrii, Yu [RU/AU]; 7/126 Croydon Avenue, Croydon Park, New South Wales, 2133 (AU).

- (74) Agent: FREEHILLS CARTER SMITH BEADLE; Level 32, MLC Centre, 19-29 Martin Place, Sydney, New South Wales 2000 (AU).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: OPTICAL DATA CARRIER SYSTEM



(57) Abstract: The present invention provides a method of holographically storing data as in a series of grating structures including m-level coded elements in an optical data carrier, wherein m ≥ 2, the method comprising: forming a grating sampling function as a direct sum of N partial grating sampling functions, each partial grating sampling function having a phase (ϕ n) and amplitude (d_n), wherein each d_n has m possible values.

2005/010871

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, F1, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— with international search report